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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,009

06/22/2006

Je-Hoon Yun

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EXAMINER

MANCUSO, HUEDUNG XUAN CAO

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

04/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,009	Applicant(s) YUN ET AL.	
	Examiner Huedung Cao Mancuso	Art Unit 2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/31/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lebaric et al. (US 6874222 B2).

As to claim 1, Lebaric (figure 4) teaches an inverted L antenna comprising: a printed circuit board 208 provided with a metal layer 214; and an antenna element 200 coupled to a portion of the metal layer in such a way that the portion dominantly generates an electric field parallel to an electric field generated by the antenna element see (figure 4, and col. 10, lines 6-33). It is noted that Lebaric does not explicitly disclose the antenna is the inverted-L antenna. However, the body of the claim does not refer back to the "inverted-L" antenna in the preamble and the recited structure in the body of the claim does not inherently or implicitly make of an inverted-L antenna therefore the preamble does not give any weight and the recited structure as shown by Lebaric can make inverted-L or other antenna.

As to claims 2-4, and 6-7, wherein the metal layer is formed in a semi- circle at the portion; wherein the metal layer is formed in triangle at the portion; wherein the metal layer is formed in oval at the portion; wherein the shape of the ground layer under the portion is equal to that of the metal layer; wherein the portion is elongated from an edge of the printed circuit board

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which Lebaric does not explicitly disclose. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select the shape or location of the metal layer to be of semi-circle or triangle or oval, since it has been held to be within the general skill of a worker in the art to select a known shape on the basis of its suitability for the intended use as a matter of obvious design choice.

As to claim 5, wherein the printed circuit board further includes: a dielectric layer formed on a bottom surface of the metal layer; and a ground layer formed on a bottom surface of the dielectric layer see (figure 4, and col. 10, lines 6-33).

As to claim 8, wherein the electric field generated at the portion is caused by a signal inputted from an electric device mounted on the printed circuit board see Lebaric (col. 12, lines 39-65).

Claims 9-10 are similar in scope to claim 1-8; therefore, they are rejected for the same reason.

Claim 11 is similar in scope to claim 1; therefore, it is rejected for the same reason.

As to claims 12-13, wherein the antenna element is arranged in such a way that it inclined at a predetermined angle from a side edge line of the metal layer; wherein the predetermined angle is approximately 45 degrees see figure 4.

Inquiries

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huedung Mancuso whose telephone number is (571) 272-1939.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens, can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Huedung Cao Mancuso/

Primary Examiner, Art Unit 2821